

REMARKS

Claims 1-27 are pending in the current application. In an Office Action dated October 8, 2008 ("Office Action"), the Examiner rejected claims 1-27 under 35 U.S.C. §101. Applicant's representative respectfully traverses these rejections.

In rejecting the current claims under 35 U.S.C. § 101, the Examiner has applied an incorrect standard for evaluating claims for patentability under U.S.C. § 101. The recent Federal Circuit decision *In re Bilski* has rejected the concrete-tangible-useful-result test. After *In re Bilski*, the test that is used to determine whether a processor method is patentable subject matter under 35 U.S.C. §101 is a machine-or-transformation test, provided by the U.S. Supreme Court in *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). A claimed process is, according to the Federal Circuit in *In re Bilski*, "surely patent-eligible under §101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." The independent claims have been amended to clearly state that the claimed methods are carried out by an electronic computer. As those even cursorily familiar with data processing well understand, analysis of microarray data sets is far too complex, tedious, error-prone, and time consuming for manual calculation.

The Examiner's assertion that computer programs are non-functional descriptive material is unsupportable under either the previous standards or the current standards. Indeed, M.P.E.P. § 2106.01 explicitly states:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component.

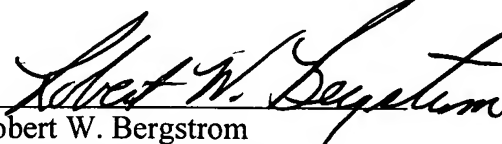
There is simply no basis for the Examiner's assertion. The Examiner's assertion directly contradicts the very meaning of the word "functional."

Finally, the Examiner's assertions that computer programs and computational processes which output "a numerical indication of the determined background intensity gradient to at least one of: a user, a display, a memory, or a

computer" are abstract ideas directly contradicts the meaning of the word "abstract." Abstract ideas do not output anything to anyone or any device. Abstract ideas do not, cannot, and have never carried out any practical, real-world task or step. The word "abstract" is defined, in one dictionary, as "considered apart from any application to a particular object or specific instance." Ideas are purely mental constructs. Furthermore, the Examiner's assertion that computation does not involve a physical process is completely incorrect. All computation, whether carried out by a mechanical calculator, an electronic calculator, or even by a human being necessarily and by definition involves physical processes, and can be characterized by thermodynamics and statistical mechanics as involving changes in physical state variables. Any calculation, by any means, involves consumption of energy. Computation does not occur independently of the physical world and physical processes, as should be well understood by anyone with scientific training.

In Applicant's representative's opinion, all of the claims remaining in the current application are clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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